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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,268	03/12/2004	Jack M. Bayt	G&C 30566.297-US-U1	9111

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EXAMINER

GOLDEN, JAMES R

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,268

Applicant(s)

BAYT, JACK M.

Examiner

James Golden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1 November 2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the communication received August 21, 2006. The instant application 10/800628 has a total of 15 claims pending. Claims 1-5, 9-13 and 16-20 are pending in the application. There are 3 independent claims and 12 dependent claims. The examiner notes that this is a non-final rejection, as a new 35 USC § 101 rejection has been issued; the examiner apologizes for any inconvenience this may cause.

Claim Objections

1. The corrections to the claims are accepted, and the objections are hereby withdrawn.

Information Disclosure Statement

2. The information disclosure statement submitted on November 1, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 16-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The specification describes computer readable

media as "logic and/or data embodied in or readable from a device, media, carrier, or signal" (paragraph 0030). Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. This rejection could be overcome by removing "media, carrier or signal" from the text of the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 9-11 and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Peckham (US 2004/0068503) in view of Chu (US 5,734,892).

7. **With respect to claims 1 and 16**, Peckham discloses a method for managing memory and an article of manufacture comprising a program storage medium readable by a computer and embodying one or more instructions executable by the computer to perform a method for managing memory, the method comprising:

- breaking up a file into two or more memory blocks [0004, lines 1-2, each memory block is a 256-MB region; 0047, lines 1-4; AIX operating system used to manage blocks];

- managing the two or more memory blocks as nodes in a heap tree (Figs. 4A-4D) [0004, lines 2-8; 0031-0033; 0041-0042; the 256-MB regions are nodes pointed to by regional control blocks];

Peckham does not disclose the limitation wherein the method further comprises:

- independently compressing one or more of the two or more memory blocks without reprocessing the file.

However, Chu discloses the limitation wherein the method further comprises:

- independently compressing one or more of the two or more memory blocks without reprocessing the file (column 2, lines 22-41).

Peckham and Chu are analogous art because they are from the same field of endeavor, namely file block management.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine compressing a single modified block of a file without recompressing the whole file of Chu with the file management system of Peckham. The motivation for doing so would have been "for efficient allocation of, and access to, stored compressed data files" (column 2, lines 10-11).

Therefore, it would have been obvious to a person of ordinary skill in the art to combine Peckham with Chu for the benefit of a file management system that compresses single blocks of data files when they are modified as specified in claim 1.

8. **With respect to claims 2 and 17**, Peckham discloses the method of claim 1 and the article of manufacture of claim 16 (see above paragraph 7), further comprising:

- receiving a request to access memory at a linear file address [0028-0029]; and

- translating the linear file address to an appropriate heap block reference to access the memory block [0004, lines 2-8; 0029, lines 5-9; 0038, lines 2-5],
 - wherein the translating utilizes a file address mapping tree comprising a mapping from linear file addresses to heap block references [0004, lines 2-8; 0031-0033; 0041-0042; the 256-MB regions are nodes pointed to by regional control blocks] (Figs. 4A-4D).

9. **With respect to claim 9**, Peckham discloses a system for managing memory comprising:

- a file broken up into two or more blocks of memory [0004, lines 1-2, each memory block is a 256-MB region; 0047, lines 1-4; AIX operating system used to manage blocks];
- a heap tree configured to manage the two or more blocks of memory as nodes in the heap tree (Figs. 4A-4D) [0004, lines 2-8; 0031-0033; 0041-0042; the 256-MB regions are nodes pointed to by regional control blocks].

Peckham does not disclose the limitation wherein:

- one or more of the two or more memory blocks are independently compressed without reprocessing the file.

However, Chu discloses the limitation wherein the method further comprises:

- one or more of the two or more memory blocks are independently compressed without reprocessing the file (column 2, lines 22-41).

10. **With respect to claim 10**, Peckham discloses the system of claim 9 (see above paragraph 9), wherein:

- each node has a heap block reference ("Pointer to Data Structures", 310 of Figs. 3A and 3B) [0004, lines 2-8; 0029, lines 5-9; 0038, lines 2-5];
- the heap tree is configured to receive a request to access memory at a linear file address [0028-0029]; and
- the heap tree is configured to translate the linear file address to an appropriate heap block reference to access the memory block [0004, lines 2-8; 0029, lines 5-9; 0038, lines 2-5].

11. **With respect to claims 3, 11 and 18**, Peckham discloses the method of claim 2 (see above paragraph 8), the system of claim 10 (see above paragraph 8) and the article of manufacture of claim 17 (see above paragraph 8), further comprising updating the file address mapping tree when a block is inserted into the heap tree (Figs. 4A-4D) [0042-0044].

12. **Claims 4-5, 12-13 and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Peckham (US 2004/0068503) in view of Chu (US 5,734,892) as applied to claims 1-3, 9-11 and 16-18 above (see paragraphs 6-11), and further in view of Rawlings, III (US 5,652,865).

13. **With respect to claims 4, 12 and 19**, Peckham discloses the method of claim 2 (see above paragraph 8), the system of claim 10 (see above paragraph 8) and the article of manufacture of claim 18 (see above paragraph 11). Peckham discloses the limitation further comprising:

- deleting an associated block from the heap tree [0063]; and
- adjusting the file address mapping tree accordingly [0063].

Peckham does not disclose the limitation further comprising updating the file address mapping tree when address space is deleted by:

- reducing a size of partial blocks as needed.

However, Rawlings, III discloses the limitations further comprising:

- reducing a size of partial blocks as needed (Fig. 17 A-C; column 10, lines 38-42, where the second block of File B is a partial block whose size is reduced after File C is deleted).

Peckham, Chu and Rawlings, III are analogous art because they are from the same field of endeavor, namely file block management.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine reducing the size of partial blocks of Rawlings, III with the file management system of Peckham and Chu. The motivation for doing so would have been because "this process provides for... an automatic optimization of storage space" (column 10, lines 21-23).

Therefore, it would have been obvious to a person of ordinary skill in the art to combine Peckham and Chu with Rawlings, III for the benefit of a file management system that reduces the size of partial blocks when other blocks are deleted to obtain the invention as specified in claims 4, 12 and 19.

14. **With respect to claims 5, 13 and 20**, Peckham discloses the method of claim 1 (see above paragraph 7), the system of claim 9 (see above paragraph 9) and the article of manufacture of claim 16 (see above paragraph 7). Peckham discloses the limitations wherein the method further comprises:

- inserting the new data as a node in the heap tree (Figs. 4A-4D) [011, lines 5-8; 0040; 0042-0044; 0047, lines 7-11).

Peckham does not disclose the limitations wherein

- the request to access memory comprises a request to insert data into the file at an insertion point; and
- the method further comprises:
 - breaking one of the memory blocks at the insertion point.

However, Rawlings, III discloses the limitations wherein

- the request to access memory comprises a request to insert data into the file at an insertion point (Fig. 5; column 6, lines 55-58); and
- the method further comprises:
 - breaking one of the memory blocks at the insertion point (column 6, lines 53-64).

Peckham, Chu and Rawlings, III are analogous art because they are from the same field of endeavor, namely file block management.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine splitting a memory block of Rawlings, III with the file management system of Peckham and Chu. The motivation for doing so would have been because this function is part of a process which "provides for... an automatic optimization of storage space" (column 10, lines 17-23).

Therefore, it would have been obvious to a person of ordinary skill in the art to combine Peckham and Chu with Rawlings, III for the benefit of a file management

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system that splits blocks to insert data to obtain the invention as specified in claims 5, 13 and 20.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Golden whose telephone number is 571-272-5628. The examiner can normally be reached on Monday-Friday, 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James R. Golden
Patent Examiner
Art Unit 2187



November 9, 2006



DONALD SPARKS
SUPERVISORY PATENT EXAMINER